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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/040,181	10/23/2001	Martin Weibrecht	DE 000186	8961

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS  
P.O. BOX 3001  
BRIARCLIFF MANOR, NY 10510

EXAMINER

TRAN, TAM D

ART UNIT	PAPER NUMBER
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2676

12

DATE MAILED: 05/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/040,181

Applicant(s)

WEIBRECHT ET AL.

Examiner

Tam D Tran

Art Unit

2676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12 are rejected under 35 U. S.C. 103(a) as being unpatentable over Edgar (USPN 5469275) in view of Hu et al. (USPN 6668097 B1), hereinafter simply Hu.

2. In regard to claim 1, Edgar teaches a method of reproducing a gray scale image in colors, in which method a color value (x, y) (color pixel) and a brightness (Y) are assigned to each shade of gray (Gray scale adjustment for adjusting brightness and color of an image, which showing association of brightness, color and grayscale, which read on assigning color value and brightness to each gray of shade), see col.1 lines 49-56, characterized in that the assignment between shades of gray and brightness is monotonic, see col.6 lines 60-65, and that the assigned color values are selected from the range (U) of a predetermined reference color (XR, YR). See col.5 lines 27-46. Edgar does not teach assigning color value and brightness to each gray of shade to provide a three-dimensional space having increasing shades of gray. However, Hu teaches assigning color value and brightness to each gray of shade to provide a three-dimensional space having increasing shades of gray (gray level dilation moves a three dimensional structuring element), see col.7 lines 36-50. It would have been obvious to a person of ordinary skill in the art

at the time of the invention to incorporate the three-dimensional surface of Hu into the method for grayscale adjustment of Edgar because the combination of Edgar and Hu would provide a reducing of ringing artifact in display system.

3. In regard to claim 1, Edgar teaches a method of reproducing a gray scale image in colors, in which method a color value (x, y) and a brightness (Y) are assigned to each shade of gray, see col.1 lines 49-56, characterized in that the assignment between shades of gray and brightness is monotonic, see col.6 lines 60-65, and that the assigned color values are selected from the range (U) of a predetermined reference color (XR, YR). See col.5 lines 27-46.

4. In regard to claim 2, Edgar teaches a method of reproducing a gray scale image in colors, characterized in that the reference color (XR, YR) is white. See col.1 lines 60-67.

5. In regard to claim 3, Edgar teaches a method of reproducing a gray scale image in colors, characterized in that different color values are assigned to each time two successive shades of gray. See col.4 lines 15-20.

6. In regard to claim 4, Edgar teaches a method of reproducing a gray scale image in colors, characterized in that the assignment between shades of gray and color values is bijective. See col.8 lines 10-20.

7. In regard to claim 5, Edgar teaches a method of reproducing a gray scale image in colors, characterized in that a recurrent series of  $m \leq n$  different color values  $((x_1, y_1), \dots, (x_m, y_m))$  is assigned to the n shades of gray in an ascending order. See col.8 lines 10-31.

8. In regard to claim 6, Edgar teaches a method of reproducing a gray scale image in colors, characterized in that the reproduction of the gray scale image in colors takes place on a color monitor (6), the assignment between shades of gray on the one side and color values (x, y) and

brightness (Y) on the other side being adapted to the dynamic range of the monitor. See col.8 lines 62-67.

9. In regard to claim 7, Edgar teaches a method of reproducing a gray scale image in colors, characterized in that the rule of assignment between the shades of gray and the control of the primary colors of the color monitor (6) is stored in a look-up table (4, 5). See col.4 lines 5-9.

10. In regard to claim 8, Edgar teaches a method of reproducing a gray scale image in colors, characterized in that the look-up table (4, 5) also takes into account the effect of the ambient brightness. See col.6 lines 30-35.

11. In regard to claim 9, Edgar teaches a method of reproducing a gray scale image in colors, a device for reproducing a gray scale image in colors, which device includes a transformation unit (3) (display processor) which assigns a color value (x, y) and a brightness (Y) of the display to each shade of gray (2), characterized in that the transformation unit is arranged in such a manner that it is capable of carrying out the method as claim in claim 8. See col.3 lines 50-60.

12. In regard to claim 10, Edgar teaches a method of reproducing a gray scale image in colors, characterized in that it includes a color monitor (6) for reproducing the gray scale image in colors, and that the transformation unit assigns the driving of the primary colors (R, G, B) of the color monitor to the shades of gray. See col.4 lines 5-9.

13. In regard to claim 11, Hu teaches a method of reproducing a gray scale image in colors, characterized in that the three-dimensional space is cylindrical. See col.7 lines 35-50.

14. In regard to claim 12, Hu teaches a method of reproducing a gray scale image in colors, characterized in that the increasing shades of gray increase along a spiral-like line. See col.7 lines 35-50.

***Response to Arguments***

15. Applicant's arguments with respect to independent claims 1 have been considered but are not moot in view of the new ground(s) of rejection.

In response to applicants' argument that the reference fails to show certain features of applicants' invention, it is noted that the features upon which applicants state "assigning color value and brightness to each gray of shade to provide a three-dimensional space having increasing shades of gray", is not recited in the rejected claims files previously.

***Conclusion***

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Tam D. Tran** whose telephone number is **703-305-4196**. The examiner can normally be reached on MON-FRI from 8:30 – 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Matthew Bella** can be reached on **703-308-6829**.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivered response should be brought to Crystal Park II, 2121 Crystal Drive,  
Arlington, VA, Sixth floor (Receptionist).


Art Unit: 2676

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Tam Tran

*TT*  
Examiner

Art unit 2676



**Kee M. Tung**  
**Primary Examiner**